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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte HABASIT AG

Appeal 2010-001752
Application 10/567,634
Technology Center 3600

Before: RICHARD E. SCHAFER, JAMESON LEE, and SALLY C. MEDLEY,
Administrative Patent Judges.

LEE, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal by HABASIT AG (“Habasit”), under 35 U.S.C. § 134(a), from a final rejection of claims 1-17 pending in Application 10/567,634. We have jurisdiction under 35 U.S.C. § 6(b). We AFFIRM.

STATEMENT OF THE CASE

References Relied Upon by the Examiner

Costanzo	Publication 2001/0045346	Nov. 29, 2001
Guldenfels	Publication 2002/0195321	Dec. 26, 2002
Verdigets	Patent 5,904,241	May 18, 1999
Nakamura	Patent 6,308,825	Oct. 30, 2001

Rejections on Appeal

Claims 1-17 were finally rejected by the Examiner under 35 U.S.C. § 103 as unpatentable over Costanzo or Guldenfels in view of Nakamura.

Claims 1-6, 8-14, 16, and 17 were finally rejected by the Examiner under 35 U.S.C. § 103 as unpatentable over Costanzo or Guldenfels in view of Verdigets.

Introduction

As explained *infra*, Habasit's invention and the applied prior art devices all relate to conveyor belt modules. Habasit's invention uses a headed pivot rod in combination with a pivot rod channel blocker ("blocker"). The applied prior art devices use either headed pivot rods or blockers, but not both in combination. The primary issue is whether Habasit's claimed combination of a headed pivot rod and a blocker would have been obvious to one with ordinary skill in the art in view of the applied prior art. Because these features are best illustrated by the prior art references, we begin with a discussion of the prior art devices.

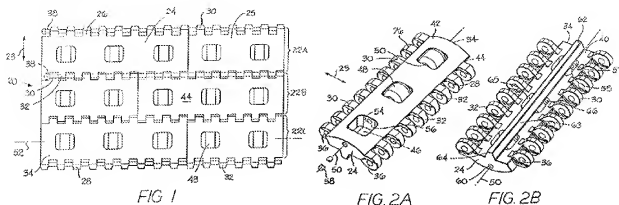
FINDINGS

The Applied Prior Art

1. Costanzo

Costanzo's Fig. 1, reproduced below, shows a plan view of interconnected modules 24, 25. Costanzo's Figs. 2A-B, also reproduced below, show top

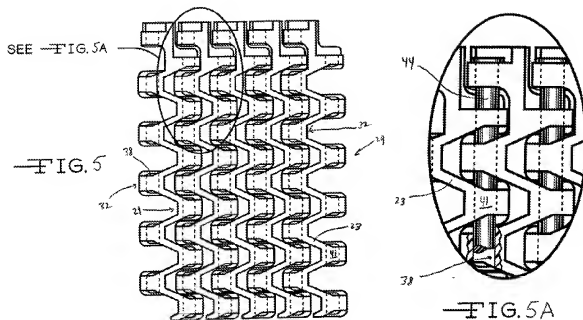
(Fig. 2A) and bottom (Fig. 2B) perspective views of one module 24. (Costanzo ¶¶ 16-18).



As shown, the modules 24, 25 have intercalating teeth 30, 32 with holes 36. When the teeth 30, 32 are intercalated, the holes 36 align to form channels (dashed lines of Fig. 1) orthogonal to the conveying direction 23 of the belt 20. A pivot rod 38 is inserted into each channel to bind the modules 24, 25 together. For example, one pivot rod 38 binds the upper row 22A and middle row 22B of modules 24, 25 together. The connections are hinge-like, allowing the belt 20 to flex between the rows 22A-C. (Costanzo ¶¶ 39-40). Costanzo does not describe the pivot rods 38 as headed, *i.e.*, as having butted ends that are too wide to enter the channels. However, Fig. 1 illustrates the pivot rods 38 as headed (see left ends of the top two pivot rods 38).

2. Guldenfels

Guldenfels' Fig. 5, reproduced below, shows a plan view of five interconnected modules 20 (not labeled; see Fig. 1 for illustration of a single module 20). Guldenfels' Fig. 5A, also reproduced below, shows an exploded view portion of those interconnected modules 20. (Guldenfels ¶¶ 9, 13, and 14).

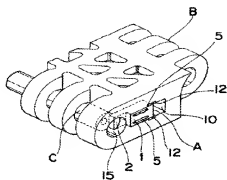


As shown, Guldenfels' modules 20 are interconnected by intercalating teeth 32 with holes 38 that form channels (dashed lines) receiving pivot rods 44. (Guldenfels ¶¶ 21-23). Guldenfels does not describe the pivot rods 44 as headed. However, Fig. 5A illustrates the pivot rods 44 as headed (see top ends of the two pivot rods 44).

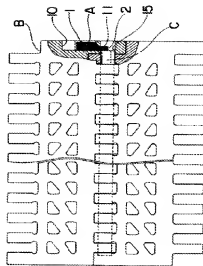
3. Nakamura

Nakamura's Fig. 4, reproduced below, shows a perspective view of a channel-end portion of Nakamura's belt module. (Nakamura 2:54-56). Nakamura's Fig. 5, also reproduced below, shows a plan view of two interconnected modules. (Nakamura 2:57-59).

[Fig. 4]



[Fig. 5]



As shown, Nakamura's modules are interconnected by intercalating teeth B with holes 15 that form channels (dashed lines of Fig. 5) receiving headless pivot rods C. (Nakamura 3:8-21; Figs. 4-5). Each module has a lowermost tooth that lacks a channel-forming hole (see bottom tooth of right module) and, in turn, prevents a pivot rod C from sliding out of that respective channel end. (Nakamura Fig. 5). And, each module has an uppermost tooth with a blocker A (see top tooth of left module) that prevents a pivot rod C from sliding out of that respective channel end. (Nakamura 3:8-16). The blocker A slides within a slot 10 crossing the channel and, accordingly, controls movement of the pivot rod C into and out of the channel. (Nakamura 3:26-47).

4. Verdigets

Verdigets' Fig. 21, reproduced below, shows a cross-sectional perspective view of a channel-end portion of Nakamura's belt module. (Verdigets 2:52-54).

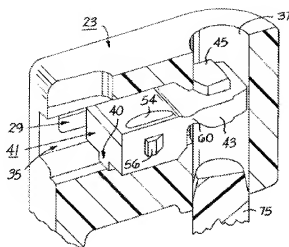
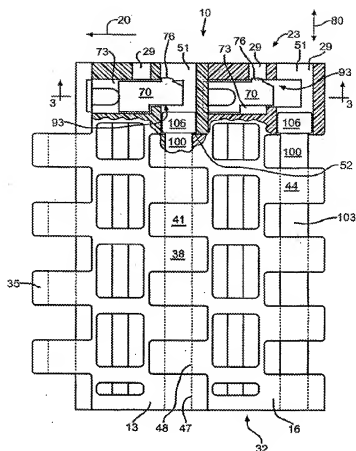


FIG. 21

Verdiget's modules are interconnected by intercalating teeth with holes 37 that form channels receiving headless pivot rods 75. (Verdigets 1:50-55; 3:36-38). As shown, each module has end tooth 23 with a blocker that slides within a slot 35 crossing the channel and, accordingly, controls the movement of the pivot rod 75 into and out of the channel. (Verdigets 5:22-26).

The Invention

Habasit's Fig. 1, reproduced below, shows a plan view of two interconnected modules 13, 16. (Spec. 3:24-26). The region of hatched lines (*i.e.*, diagonal pattern) is a cut-out view portion omitting the top surface of the modules 13, 16 to reveal the pivot rod heads 106 and blockers 70 thereunder. (Spec. 6:23-25). The modules 13, 16 are interconnected by intercalating teeth 35, 38, 41, 44 with holes 47, 48 that form channels (dashed lines) receiving pivot rods 100. (Spec. 6:15-23).



The pivot rods 100 have heads 106 that fit within channel openings 51 of the uppermost teeth, but do not fit within the channels. (Spec. 6:23-27). When the pivot rods 100 are inserted in the channels, the pivot rod heads 106 seat on edges 52 of the channel openings 51, such that the pivot rods 100 cannot slide too far into the channels and, in turn, cannot slide out of the far channel ends. (Spec. 6:25-7:13).

Blockers 70 slide within cavities 73 intersecting the channel openings 51 at regions above the seated pivot rod heads 106. (Spec. 7:26-8:12). When in the blocking position shown for the left module 13, a blocker 70 prevents the pivot rod 100 from sliding out of the channel opening 51. When in the open position shown for the right module 16, a blocker 70 allows the pivot rod 100 to slide out of the channel opening 51. (Spec. 7:14-20; 9:6-10).

ANALYSIS

Habasit has chosen to let the claims stand or fall together. (Brief 6:22; 8:13-14). We select claim 1 as representative. 37 C.F.R. § 41.37(c)(vii). We reproduce claim 1 with paragraphing added and emphasis placed on the contested limitations (discussed *infra*), which are the combination of the headed pivot rod and blocker (“blocking member”) and the feature of the edge portion pivot rod opening.

1. A belt module for use with a **headed pivot rod**, the belt module, comprising:

a first plurality of link ends disposed in a direction of belt travel, the first link ends having first pivot rod openings disposed transverse to the direction of belt travel;

a second plurality of link ends extending in a direction opposite to the first plurality of link ends, the second link ends being offset from the first link ends such that adjacently positioned belt modules are capable of intercalating so that the first link ends of one belt module fit into spaces defined between the second plurality of link ends of an adjacent belt module, the second link ends having second pivot rod openings disposed transverse to the direction of belt travel;

an edge portion having an edge portion pivot rod opening disposed transverse to the direction of belt travel, the edge portion pivot rod opening having a diameter larger than a diameter of the first and second pivot rod openings such that the pivot rod can only be removed in one direction, the edge portion pivot rod opening being in registry with the second pivot rod openings, the edge portion having a slot defined therein, the slot intersecting with the pivot rod opening; and,

a blocking member disposed in the slot and capable of moving between a first position and a second position, the blocking member extending into the edge portion pivot rod opening and obstructing the head of the pivot rod in the second position such that the pivot rod is prevented from exiting the edge portion pivot rod opening.

Claims 1-17 were rejected under 35 U.S.C. § 103 over Costanzo or Guldenfels in view of Nakamura. Claims 1-6, 8-14, 16, and 17 were rejected under 35 U.S.C. § 103 over Costanzo or Guldenfels in view of Verdigets. Because the prior art was similarly applied by the rejections to claim 1, we address the two rejections together.

The Examiner cited Costanzo and Guldenfels as individually teaching headed pivot rods. (Ans. 3:13-4:2). The Examiner cited either Nakamura or Verdigets as individually teaching blockers. (Ans. 4:3-17; 5:21-6:7). The Examiner then determined that it would have been obvious to one with ordinary skill to provide Guldenfels' and Costanzo's modules with either Nakamura's or Verdigets' blocker in order to prevent Guldenfels' and Costanzo's pivot rods from slipping out of the channel ends receiving the pivot rod heads. (Ans. 4:19-5:2; 6:8-13).

In response, Habasit argues that none of the references teaches the claimed combination of a headed pivot rod and blocker (Brief 6:23-8:8 and 8:15-24; Reply 3:4-12 and 3:25-4:2) or the feature of the edge portion pivot rod opening (Reply 4:6-5:1). Habasit's arguments are unpersuasive.

Combination of a Headed Pivot Rod and a Blocker

Costanzo and Guldenfels both disclose pivot rod heads. Though Costanzo and Guldenfels do not explicitly discuss the pivot rod heads, the function of the pivot rod heads is evident from the respective disclosures. As shown in Costanzo's Figs. 2A-B and Guldenfels' Fig. 5, the channels pass straight through the modules. Because the channel ends are not configured to retain the pivot rods, each pivot rod head clearly prevents the respective pivot rod from sliding out of the far channel end, *i.e.*, from sliding out of the module side opposite of the pivot rod head.

Nakamura and Verdigets both disclose blockers. As explained by Nakamura and Verdigets, each blocker prevents the respective pivot rod from sliding out of the near channel end, *i.e.*, from sliding out of the module side of the blocker. (Nakamura 3:26-47; Verdigets 5:22-26).

Thus, the prior art references show that both pivot rod heads and blockers were known to prevent a pivot rod from sliding out of a channel end, but are placed at different sides of a module to perform that function. Particularly, a pivot rod can be prevented from sliding out of a given channel end by using a blocker at that given channel end or by using a pivot rod head at the opposing channel end.

Knowing that pivot rod heads and blockers are viable options for pivot rod retention, a skilled artisan would have found it obvious to provide Guldenfels' and Costanzo's modules with either blockers or additional pivot rod heads (*i.e.*, with dual headed pivot rods) in order to prevent the pivot rods from sliding out of the channel ends receiving the illustrated pivot rod heads. That is, a skilled artisan would have understood that Costanzo's pivot rods 38 can be prevented from sliding out of the left side of the Costanzo's Fig. 1 belt by adding either blockers at the left side channel ends of the belt or by adding pivot rod heads at the right side channel ends of the belt. Similarly, a skilled artisan would have understood that Guldenfels' pivot rods 44 can be prevented from sliding out of the top side of the Costanzo's Fig. 5 belt by adding either blockers at the top side channel ends of the belt or by adding pivot rod heads at the bottom side channel ends of the belt.

Habasit argues that, because none of the references even disclose both pivot rod heads and blockers, the conveyor belt field had clearly not yet considered the claimed combination of a pivot rod head and blocker. (Brief 7:12-8:24). The argument is misplaced. Obviousness is not determined from the perspectives of actual individual inventors, but rather from the perspective of a hypothetical person

of ordinary skill who is presumed to know all the pertinent prior art. *Standard Oil Co. v. American Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985). Also, Habasit cannot show nonobviousness by attacking the applied references individually where, as here, the obviousness rejection relies on a combination of teachings from different references. *In re Merck*, 800 F.2d 1091, 1097 (Fed. Cir. 1986).

Habasit also argues that the claimed combination of a pivot rod head and blocker eases the removal of a respective pivot rod by placing all of the pivot rod retention elements on the same side of the belt module. (Brief 6:26-7:11). This argument is also misplaced. A benefit must be unexpected to be probative of nonobviousness. *Pfizer Inc. v. Apotex Inc.*, 480 F.3d 1348, 1371 (Fed. Cir. 2007). Habasit has not alleged, much less demonstrated, that the benefit would have been unexpected of the combination by one with ordinary skill in the art. Even if Habasit had asserted the benefit as unexpected, mere argument of counsel cannot take the place of evidence lacking in the record. *Estee Lauder Inc. v. L'Oreal, S.A.*, 129 F.3d 588, 595 (Fed. Cir. 1997).

Appellant further argues that placing all of the pivot rod retention elements on the same side of the belt module solved a known problem. However, Appellant failed to show by objective evidence that there was an industry-wide problem that others in the art have attempted to solve for a long time but failed to arrive at a solution. To establish long-felt but unresolved need, one must demonstrate that the widespread efforts of skilled workers, having knowledge of the prior art, failed to find a solution to the problem. *In re Allen*, 324 F.2d 993, 997 (CCPA 1963). Also, a showing of failed attempts of others requires that others making the attempt had knowledge of the prior art and still failed despite having guidance from the prior art. *See In re Sneed*, 710 F.2d 1544, 1550 (Fed. Cir. 1983); *In re Wright*, 569 F.2d 1124, 1127 (CCPA 1977) (“The mere age of the references is not persuasive of the

unobviousness of the combination of their teachings, absent evidence that, notwithstanding knowledge of the references, the art tried and failed to solve the problem.”).

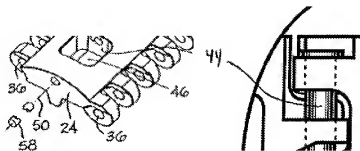
Edge Portion Pivot Rod Opening

Claim 1 also requires an edge portion pivot rod opening that is (1) disposed transverse to the direction of belt travel, (2) has a diameter larger than a diameter of a formed pivot rod channel (recited as the “first and second pivot rod openings” of intercalating teeth), such that the pivot rod can be removed in only one direction, (3) is in registry with the channel, and (4) has an intersecting blocker slot defined therein. Giving the term “opening” a broadest reasonable interpretation consistent with the specification, *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316-17 (Fed. Cir. 2005) (*en banc*), we construe the claimed edge portion pivot rod opening to be an unobstructed space¹ with the above-stated features.

We find that all but the slot feature is satisfied by both Costanzo’s and Guldenfel’s modules. As shown by the partial reproductions of Costanzo’s Fig. 2A and Guldenfels Fig. 5A, respectively below left and below right, the end teeth of Costanzo’s and Guldenfels’ modules have cut-out portions that provide unobstructed spaces for the pivot rod heads to recess within. The unobstructed spaces are in registry with the respective channels. The unobstructed spaces are also larger in diameter than the respective channels, as measured orthogonally

¹ opening. Dictionary.com. *Dictionary.com Unabridged*. Random House, Inc. <http://dictionary.reference.com/browse/opening> (accessed: September 21, 2011) (defining “opening” as “an unobstructed or unoccupied space or place” and as “a void in solid matter; a gap, hole, or aperture”).

from the spaces' and channels' common central axes² and such that the pivot rods can be removed in only one direction.



Adding a sliding blocker to Costanzo's and Guldenfels' modules, in view of Nakamura or Verdigets, would logically entail the addition of slots – *e.g.*, grooves, notches, slits, or apertures³ – that guide a portion of the blockers over the pivot rod heads and accordingly intersect the unobstructed spaces. In any event, even if such a slot were not necessary, the use of slots to guide blockers was known in the art. Using slots to guide the blockers added to Costanzo's and Guldenfels' modules would therefore only unite known elements – slots and blockers – with no change in their respective functions. *KSR Int'l v. Teleflex, Inc.*, 550 U.S. 398, 415-416.

Habasit argues that neither Guldenfels nor Costanzo teaches the edge portion pivot rod opening and states (Reply. 4:10-14):

When read in light of the specification, the edge portion pivot rod opening claimed in the application is a through hole of a diameter sufficient to allow the head portion 106 of a pivot rod 103 to pass through the edge portion pivot rod opening 51 and be obstructed by

² diameter. Dictionary.com. *Dictionary.com Unabridged*. Random House, Inc. <http://dictionary.reference.com/browse/diameter> (accessed: September 21, 2011) (defining "diameter" as "a straight line passing from side to side of any figure or body, through its center").

³ slot. Dictionary.com. *Dictionary.com Unabridged*. Random House, Inc. <http://dictionary.reference.com/browse/slot> (accessed: September 21, 2011). (defining "slot" as "a narrow, elongated depression, groove, notch, slit, or aperture").

the ledge 52 created by the smaller diameter of the aperture 47. *See* application at page 6, line 23 - page 7, line 8 and Fig. 1.

Habasit appears to construe the claimed “edge portion pivot rod opening” as having the precise structure of the channel opening 51 shown by Habasit’s Fig. 1. The Figure illustrates the channel opening 51 as a throughhole passing through a respective end tooth. Habasit essentially argues that in view of the modules shown by Habasit’s Fig. 1, the claimed module must have a throughhole that completely envelopes both the pivot rod head and the blocker portion restraining the pivot rod head. The argument is without merit.

In proceedings before the USPTO, claim terms are properly construed according to their broadest reasonable interpretation in light of the specification. *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989). Extraneous limitations from the specification should not be read into any claim which does not require them. *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1433 (Fed. Cir. 1988). “Absent claim language carrying a narrow meaning, the PTO should only limit the claim based on the specification or prosecution history when those sources expressly disclaim the broader definition.” *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004); *see also Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906-09 (Fed. Cir. 2004)(explaining need for disclaimer in either the specification or prosecution history).

Claim 1 simply does not require a throughhole. Rather, claim 1 broadly recites an edge portion pivot rod “opening” that is larger in diameter than its respective channel, such that a respective pivot rod can be removed in only one direction. We have not been directed to any disclaimer which leads to the requirement of a throughhole. We note further that in its specification, Habasit states: “While the invention has been described in connection with certain

embodiments, it is not intended to limit the scope of the invention to the particular forms set forth.” (Spec. 11:16-19).

Conclusion

In view of all of the disclosures of the cited prior art, the proposed addition of blockers to Costanzo’s and Guldenfels’ modules would have been obvious to one with ordinary skill in the art at the time of the invention. We are not persuaded of error in the obviousness rejection of claim 1. The remaining claims fall with claim 1.

DECISIONS

We affirm the rejection of Claims 1-17 under 35 U.S.C. § 103(a) as unpatentable over Guldenfels or Costanzo in view of Nakamura.

We affirm the rejection of Claims 1-6, 8-14, and 16-17 under 35 U.S.C. § 103(a) as unpatentable over Guldenfels or Costanzo in view of Verdigets.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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